

AMENDMENTS TO THE CLAIMS

1 - 13. (Cancelled)

14. - 18. (Canceled)

19. (Canceled)

20. - 24. (Canceled)

25. - 31. (Canceled)

32. (Canceled)

33. (Withdrawn & Currently Amended) A method for measuring the intracellular ATP comprising: extracting ATP from a cell sample in the presence of a surfactant, adding a luminescence reagent containing the surfactant resistant luciferase of Claim 35[[,]] or 37 ~~or~~ 40 for a time and under conditions suitable to produce the emission of light, and detecting or measuring the emission of light.

34. (Withdrawn & Currently Amended) A method for measuring the intracellular ATP comprising: extracting ATP from a cell sample in the presence of a surfactant, adding a luminescence reagent containing the surfactant resistant luciferase of Claim 35[[,]] or 37 ~~or~~ 40 for a time and under conditions suitable to produce the emission of light, and detecting or measuring the emission of light.

35. (Previously Presented) A luciferase protein that retains more than 85% of its luciferase activity in 0.1% benzalkonium chloride compared to its luciferase activity in the absence of benzalkonium chloride produced by a process comprising:

culturing a bacterium comprising a polynucleotide obtained by amplifying a template nucleic acid prepared from GENJI firefly or HEIKE firefly using the oligonucleotide primers having the sequence of SEQ ID Nos: 1 and 2 that encodes a luciferase protein that retains more than 85% of its luciferase activity in 0.1% benzalkonium chloride compared to its luciferase activity in the absence of benzalkonium chloride, and that comprises a product of amplification of a template nucleic acid prepared from GENJI firefly or HEIKE firefly using the oligonucleotide primers having the sequence of SEQ ID Nos: 1 and 2 and recovering from the culture said luciferase protein.

36. (Canceled)

37. (Currently amended) A firefly luciferase having resistance to a surfactant, wherein said luciferase retains at least 85% of its activity in the presence of 0.1% surfactant, said luciferase ~~comprising the amino acid sequence~~ PXAVVVLX₄₉₀GKXMTEhaving a mutation, in which X₄₉₀ the amino acid corresponding to glutamic acid 490 in HEIKE firefly luciferase is an amino acid other than glutamic acid ~~and X is any amino acid.~~

38. - 39. (Canceled)

40. (Canceled)

41. (Canceled)

42. (Canceled)